

REMARKS

I. INTRODUCTION

No new matter has been added. Thus, claims 1-14 are pending in the present application. Applicants would like to thank the Examiner for indicating that claims 11 and 13 contain allowable subject matter. However, in view of the following remarks, it is respectfully submitted that all of the presently pending claims are allowable.

II. THE 35 U.S.C. § 103(a) REJECTIONS SHOULD BE WITHDRAWN

Claims 1-10, 12 and 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Pub. No. 2002/0049375 to Strommer et al. (hereinafter “Strommer”) in view of U.S. Patent No. 5,951,475 to Guerziec et al. (hereinafter “Guerziec”). (See 05/15/08 Office Action, p. 2).

Strommer describes a medical imaging and navigation system. (See Strommer Abstract). The medical imaging and navigation system includes a processor, an MPS, a two-dimensional imaging system and an inspected organ monitor interface. (See Strommer, p. 3, ¶ 0037). The imaging system includes an image detector which may be firmly attached to an imaging catheter. (See Strommer, p. 4, ¶ 0037). Guerziec describes a method and system for registering two dimensional fluoroscopic images with a three dimensional model of a surgical tissue of interest. (See Guerziec Abstract).

Claim 1 recites “acquiring a three-dimensional representation of *feasible locations of the object* within the body volume.” The Examiner asserts that this recitation is taught by Strommer based on the disclosure that, “in processor 234, the three dimensional location and orientation of the image is detected where MPS system, figure 1, detects the three dimensional location and orientation of the image detector using MPS sensor 162, paragraph [151].” (See 05/15/2008 Office Action, p. 3). Applicants respectfully disagree. Strommer describes detecting and

locating a single location and orientation of the actual image detector using the MPC sensor. Strommer does not describe detecting the feasible locations (*plural*) of the image detector using the MPC sensor but rather the single actual location and orientation of the image detector. (See Strommer, p. 10, ¶ 0151). Thus, Applicants respectfully submit that Strommer neither teaches nor suggests “acquiring a three-dimensional representation of feasible locations of the object within the body volume,” as recited in claim 1. Notably, claim 1 further recites “determining a current position of the object in the body volume...” which is distinguishable from “acquiring...feasible locations... of the object”

Claim 1 further recites “associating the current position of the object with the three-dimensional representation.” There is no teaching or suggestion in Strommer that the position of the object is associated with the three-dimensional image using the recited steps.

Furthermore, claim 1 also recites “controlling movement of an imaging system *based on the imaging parameters*.” The Examiner asserts that this recitation is taught by Strommer because “the physician controls the movement of the surgical tool, paragraph [0154].” (See 05/15/2008 Office Action, p. 3). Strommer describes modifying the two-dimensional images by discarding a portion thereof, which represents the surgical tool. (See Strommer, p. 10, ¶ 0154). The main computer 102 determines a three-dimensional space, which is occupied by surgical tool 120, according to the information which MPS sensor 162₁ acquires and according to data respective of the physical surgical tool 120. (See Strommer, p. 10, ¶ 0154). The main computer then discards the image of the surgical tool 120 from the two dimensional images. (See Strommer, p. 10, ¶ 0154). As the Examiner states, “the physician controls the movement of the surgical tool.” However, upon movement of the surgical tool by the physician the main computer must determine the new three-dimensional space occupied by the surgical tool and discard the new image of the surgical tool. The physician may move the surgical tool in Strommer without any regard for the main computer and any movement by the physician will cause the main computer to perform additional modifications to images. That is, the movement described by Strommer is not “based on the imaging parameters.” Thus, Applicants respectfully

submit that Strommer does not teach or suggest “controlling movement of an imaging system based on the imaging parameters,” as recited in claim 1.

Applicants respectfully submit that Gueziec does not cure the above deficiencies of Strommer. Therefore, Applicants respectfully submit that claim 1 is patentable over Strommer and Gueziec, either alone or in combination. Because claims 2 and 12 depend from, and therefore include all the limitations of claim 1, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 1.

Independent claim 3 recites “a data processing unit with a memory which stores a three-dimensional representation of feasible locations of the object within the body volume, the data processing unit being adapted to: ... control movement of the imaging system based on the imaging parameters to generate a second two-dimensional image.” Thus, Applicants respectfully submit that claim 3 is allowable for at least the same reasons as claim 1. Because claims 4-10 and 14 depend from and therefore include all of the limitations of claim 3, it is respectfully submitted that these claims are also allowable for at least the same reasons given above with respect to claim 3.

CONCLUSION

In light of the foregoing, Applicants respectfully submit that all of the now pending claims are in condition for allowance. All issues raised by the Examiner having been addressed, an early and favorable action on the merits is earnestly solicited.

Respectfully submitted,

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